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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,018	02/03/2004	Cherif Keramane	U03-0123.63	2017
7590 Gregory Stephens Williams Mullen P.O. Box 13646 Research Triangle Park, NC 27709-3646			EXAMINER LAROSE, COLIN M	
			ART UNIT 2624	PAPER NUMBER
			MAIL DATE 08/22/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/708,018	KERAMANE, CHERIF	
	<b>Examiner</b>	<b>Art Unit</b>	
	Colin M. LaRose	2624	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 July 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Amendments and Remarks***

1. Applicant's amendments and remarks dated 16 July 2007, have been entered and made of record.

### ***Response to Amendments and Remarks***

2. Applicant's amendments to independent claims 1, 7, and 13 appear to overcome the previous rejections; however, new grounds of rejection appear below.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,593,955 by Falcon in view of WO 02/085018 by Jang et al. ("Jang").

Regarding claims 1, Falcon discloses a mobile phone (figure 1; column 1/66 et seq.: "a videophone system"; column 3/22-26: the videophone may be a "hand-held device") having a software application for reducing the bitrate of an image to be transmitted by the mobile phone, said mobile phone comprising:

a processor (21);

a processor readable storage medium (22);

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code recorded in the processor readable storage medium (35-38) to remove a portion of an original image frame thereby creating dead clusters within the image frame (figure 4, step 72-a: the head and bust of a person in an image is segmented from the background, which is to be removed);

code recorded in the processor readable storage medium (35-38) to fill the dead clusters of the removed portion of the image frame with data to create a new image frame having a smaller bitrate than the original image frame (figure 4, step 72-b: the background area is filled with monotonous data, thereby reducing the bitrate of the image); and

code recorded in the processor readable storage medium (35-38) to encode the new image frame such that it requires less bandwidth during transmission than the original image frame would require (column 6/55-59).

Falcon discloses that the video phone system can comprise a "hand-held device," but does not expressly disclose that the system wirelessly transmits the encoded image frame via an RF component.

Jang discloses a similar video phone system that includes an image codec for reducing the bitrate of an image. In particular, Jang provides an RF component (100) for wirelessly transmitting images and audio. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Falcon by Jang to include an RF component in Falcon's hand-held video phone, since Jang shows that it was conventional to utilize such a component for wirelessly transmitting encoded images to third-party recipients. Furthermore, the advantages of transmitting data wirelessly, as opposed to over a wire, would have been readily apparent to persons of ordinary skill in the art.

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Claims 7 and 13 recite the corresponding method and apparatus of claim 1 and are rejected on substantially the same grounds.

Regarding claims 2, Falcon discloses the data used to fill the dead clusters is any solid color, such as blue or black, but does not expressly disclose white (column 7/31-34,44-45). However, the use of white would have been obvious to those skilled in the art in view of Falcon's teaching that any monotonous hue can be utilized as the background color.

Claims 8 and 14 recite the corresponding method and apparatus of claim 2 and are rejected on substantially the same grounds.

Regarding claim 3, Falcon discloses the data used to fill the dead clusters is any solid color, such as white or black (column 7/31-34,44-45).

Claims 9 and 15 recite the corresponding method and apparatus of claim 3 and are rejected on substantially the same grounds.

Regarding claim 4, Falcon discloses code recorded in the processor readable storage medium (35-38) to include a representation of the removed portion of the original image frame with the new image frame during wireless transmission of the new image frame so that it may be utilized by the receiver to improve the presentation of the received image frame by integrating it back into the received image frame (i.e. the monotonous color data substituted for the background is utilized as "a representation" of the removed background portion and is transmitted with the encoded image and utilized by the receiver to reconstruct the image by integrating the monotonous color data with the foreground data).

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Claims 10 and 16 recite the corresponding method and apparatus of claim 4 and are rejected on substantially the same grounds.

Regarding claim 5, Falcon discloses code recorded in the processor readable storage medium (35-38) to automatically determine whether there is a subject centered in the original image frame prior to executing the bitrate reduction software application on the original image frame (figure 3, steps 71-d—71-e); and

code recorded in the processor readable storage medium (35-38) to execute the bitrate reduction software application if the original image is determined to contain a primary object centered in the image frame (column 6/55-59).

Claims 11 and 17 recite the corresponding method and apparatus of claim 5 and are rejected on substantially the same grounds.

Regarding claim 6, Falcon does not expressly disclose automatically determining whether there is a subject centered in the original image frame using a contour detection technique applied to the data in the image frame. However, Falcon teaches that the center of a subject's head can be detected "using any one of known face detection algorithms, or other suitable algorithms" (column 6/46-48). Based on this teaching, it would have been obvious to those skilled in the art to utilize any face detection technique that extracts facial contours in order to determine the center of the face.

Claims 12 and 18 recite the corresponding method and apparatus of claim 6 and are rejected on substantially the same grounds.

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5. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,593,955 by Falcon in view of WO 02/085018 by Jang et al. ("Jang") and U.S. Patent 7,009,650 by Kashio.

Regarding claims 19-21, neither Falcon nor Jang appear to disclose that the original image frame comprises an existing stored image file on the storage medium of the mobile phone. Both Falcon and Jang are directed to video telephone systems that employ live video.

Kashio discloses a mobile phone video transmission system that is capable of processing video data prior to transmission. In particular, Kashio's system allows a video sequence to be captured and stored in image memory (S32, figure 10). Later, when the video is to be transmitted, the file is retrieved and processed for transmission (figure 14). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Falcon and Jang by Kashio in order to store the original image in a storage medium of the mobile phone since Kashio shows that pre-storing captured video as a file for transmission over a wireless network is advantageous in situations where a user wishes to send the video attached to e-mail or the like at a later time—i.e., not in real-time (see e.g. column 1/5-35; 4/45-54).

### *Conclusion*

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO



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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000. Any inquiry of a general nature or relating to the status of this application or proceeding can also be directed to the TC 2600 Customer Service Office whose telephone number is (571) 272-2600.



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A handwritten signature in black ink, appearing to read 'CML', is positioned above the printed name.

Colin M. LaRose

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19 August 2007